





Racion Frequency

Automatic Identification Technology

AUTOMATED MANIFEST









RF/AIT

- Definition
- Employment
- Equipment
- Software
- Total Asset Visibility

RF/AIT Definition

 "A suite of technologies that enables the automatic capture of source data,

- thereby enhancing the ability to:
- Track
- Document
- Control

deploying and re-deploying forces, equipment, personnel and sustainment cargo."

Includes devices to automate the collection of information concerning assets in-storage, in-process, and in-transit

Supports the Army Total Asset Visibility Program (TAV)

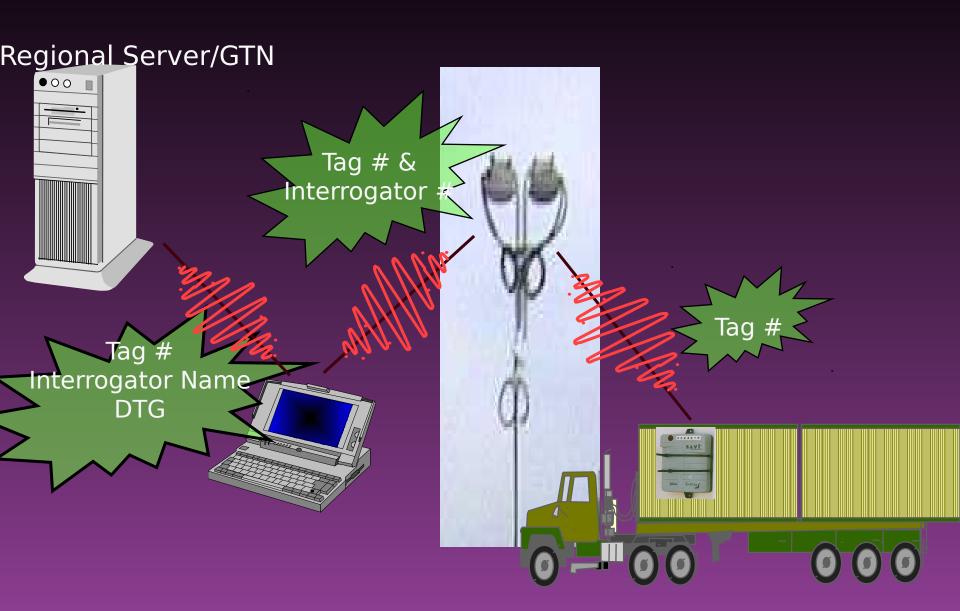
RF/AIT Objectives

Understand the design, capabilities, and application of RF/AIT equipment

Become familiar

with basic concepts and terms associated with RF/AIT

Concept of Operations

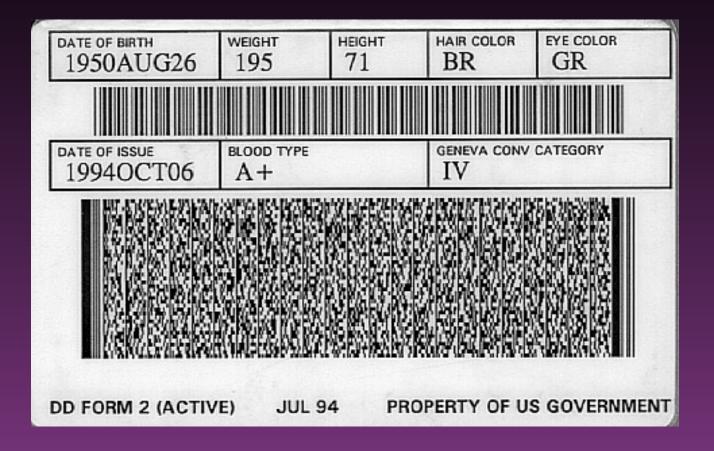


3 OF 9 BARCODE

This card remains the property of Safeway Inc. and must be surrendered upon request. This card may not be used to establish credit or as personal identification. Safeway reserves the right to request additional information or identification. For information, please call customer service at (301) 386-6550.

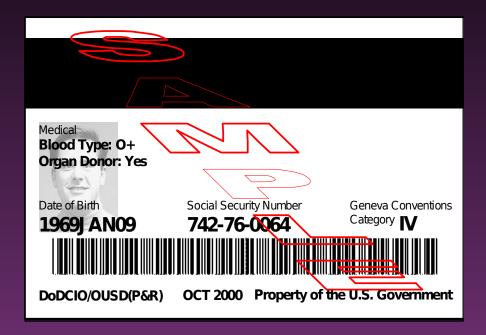


2D BARCODE MARKING



Common Access Card





RF/AIT Equipment "Old

SAVI Seal Tag II Capabilities:

Seal

300-Foot Range

128K bytes Read/Write Memory

Multiple Tag Collection

Omni-Directional Communication





RF/AIT Equipment old"

Docking

Capabilities:

Create RFID Tags

Retrieve RFID Info

"WINDOWS" Driven

RF/AIT Equipment "New

SaviTag 410R RF Tag:

New Design

128KB Storage

Improved Battery Case

Same Characteristics of "Old" Seal Tag

RF/AIT Equipment "New"

SDS 1001 Docking Station Capabilities:



Capabilities:

300-Foot Range

Multiple Tag
Collection

Omni-Directional Communication

Tags
Simultaneously
High-Speed
Data Transfer

Fixed Interrogat or







Savi Hand-Held Interrogator Capabilitic

300-Foot Range

Multiple Tag Collection

Omni-Directional Communication

Tag Homing Capability

Data Entry and File Editing



Hand-Held



SYMBOL PDT 8146 Capabilities:

New Hand-Held Interrogator

64 MB of RAM

Reads Linear Bar Codes

Reads RF Tags

Reads 2D Bar Code



<u>Linear Bar</u> <u>Code</u>

- Limited to 20 Characters
- Identifies:
 - Consignee
 - TCN
 - Number of Pieces



DOD AIT TEST IN EUCOM MSL, Version 2.1, 28 April 1998

Direct Thermal/Thermal Transfer Print

Printer

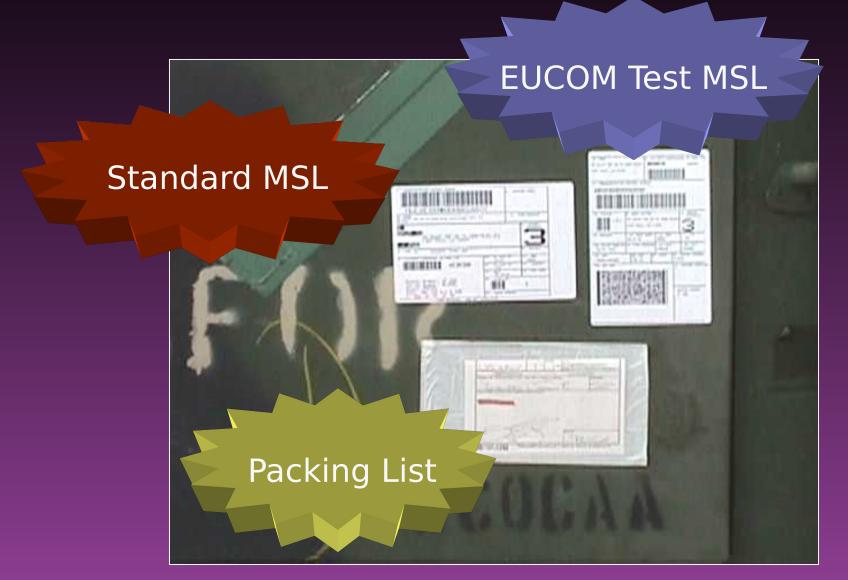
Creates Military Shipping Label

Creates Linear and 2D Bar Codes

Durable & Survives the Elements



Employment of Military Shipping Label:



The SAVI Tag Database Can Be Queried Using The SAVI Batch Collection Protocol ...

I'm SAVI Tag #1234 ... I've got stuff









IN JUST

Who has stuff?

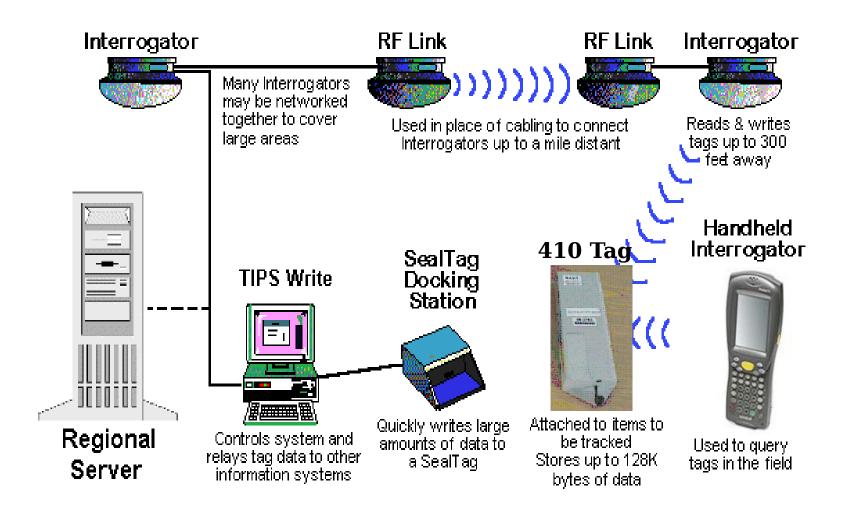


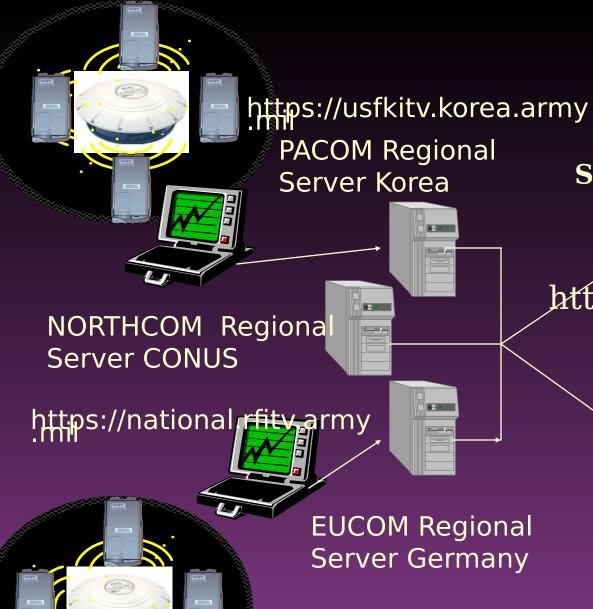
19 (115) Victoriani

I'm SAVI Tag #3234 ... I've got stuff



RF/AIT System Architecture





GTN Scott Air Force

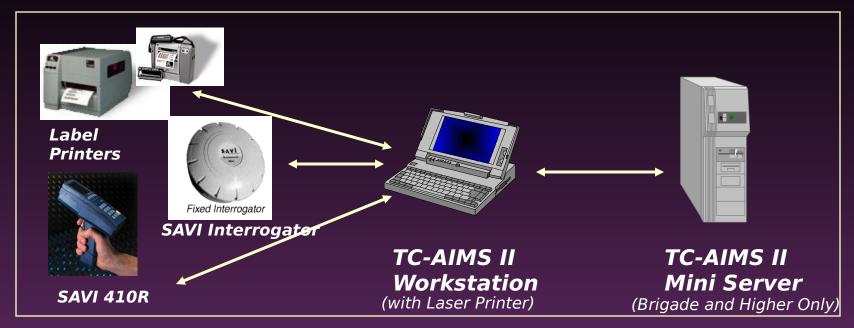
https://www.gtn.transco

OTHER AUTOMATED SYSTEMS



https://europeitv.aelog.arm

Basic Hardware Suite





















REID/ITV Hardware

RFID Tags

- 128 KB of transportation and shipment data can be written to the Tag
 - Powered by 3.6 Volt Lithium Battery
 - Operates at Frequency of 433.9 MHz



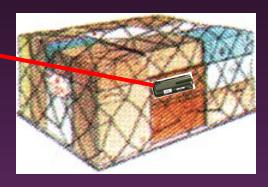
Tag Battery

RFID Tags contd_

• Mounted on Shipping Containers, Pallets

<u>& Vehicles</u>









RFID Tags contd.

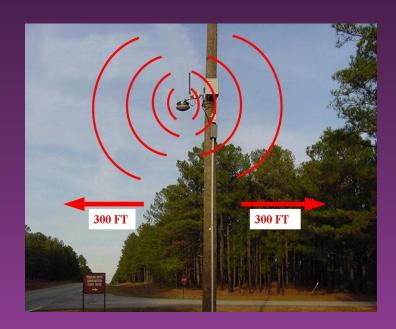
- Remains in "Sleep" mode until activated by the "Wake-Up" signal from an Interrogator
 - Tag Transmits ID Number to Interrogator

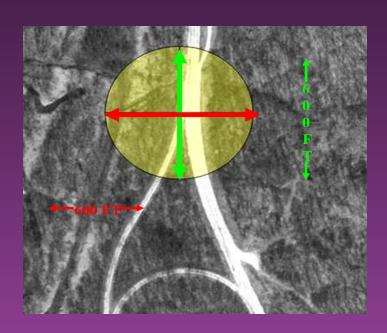




<u>Interrogator</u>

- Performs read/write ops to multiple tags
 - Collects tag IDs
- Transmits Wake-Up Signal Omni directionally
 - Collection range of 600 ft. Diameter





Interrogator contd.

- Operates at a frequency of 433.9 MHz
- Installed at "Nodes" to collect passing tags
- Read Station Configurations: Early Entry Deployment Support Kit, Temporary and Permanent Install



Fly Away Kit

(Early Entry Deployment Support Kit (E²DSK))

CASE B (2) RFR 100's

with all

components.

Interrogator

HHI

Charging

Cradle

Size

26"X24"X19 1/2"

Weight=76lbs

CASE C

- (2) Tripods
- (2) Mounting Poles
- (2) 50' Cords
- (1) 25' Cord

(-) -- -- --

Tool Kit

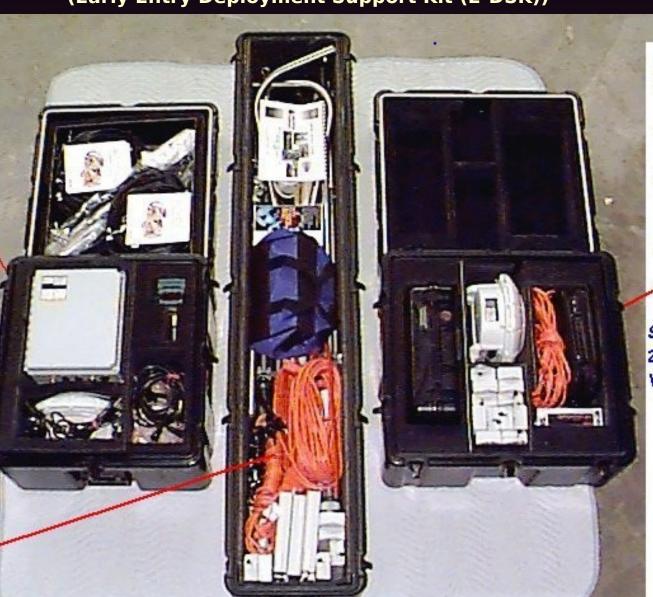
18 RF Tags

(2) Power Strips

Training Package

74"X15 1/2X16"

Weight=120lbs



CASE A
Interrogator

Laptop

Mini-M

15ft Power

Cord

Power Strip

DC to AC

Converter

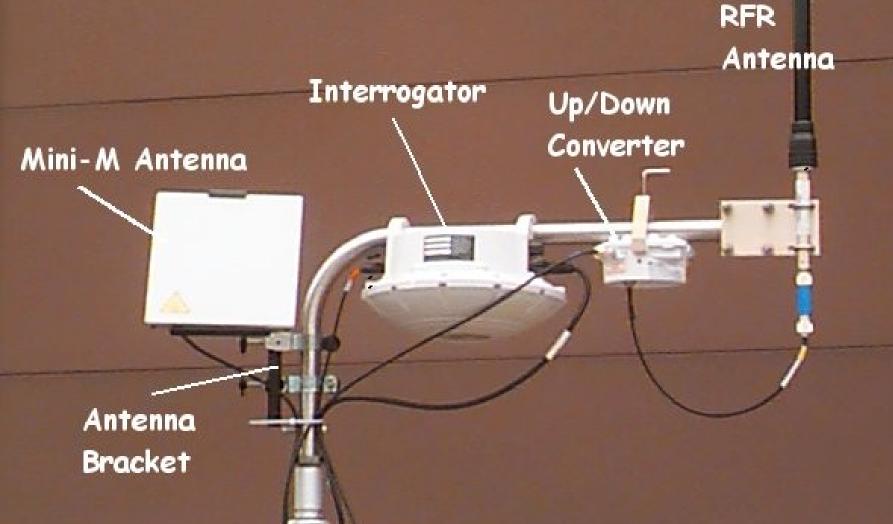
12 RF Tags

Size

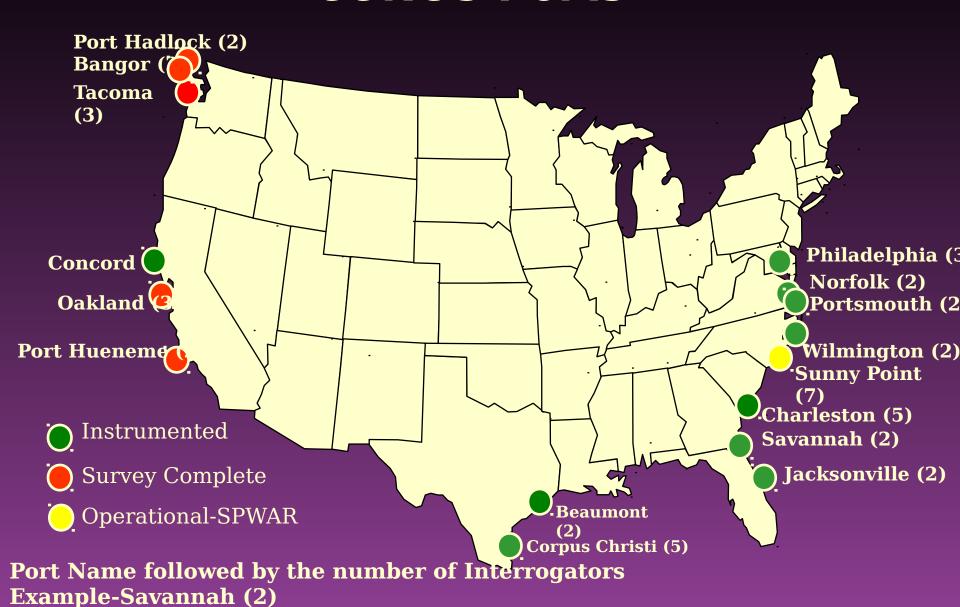
28"X24"X191/2"

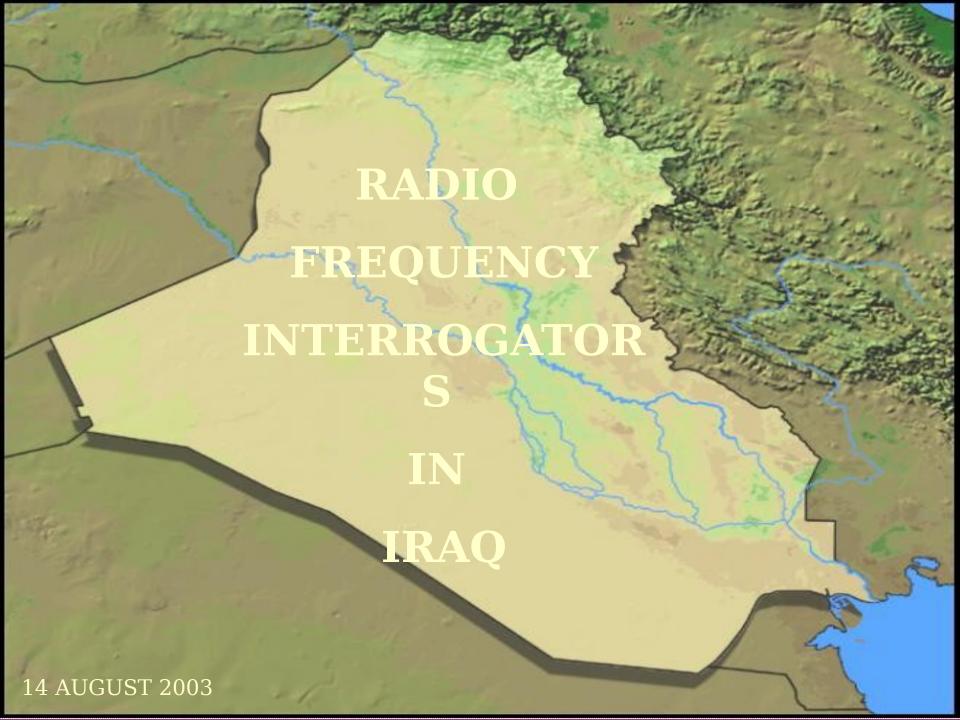
Weight=85lbs

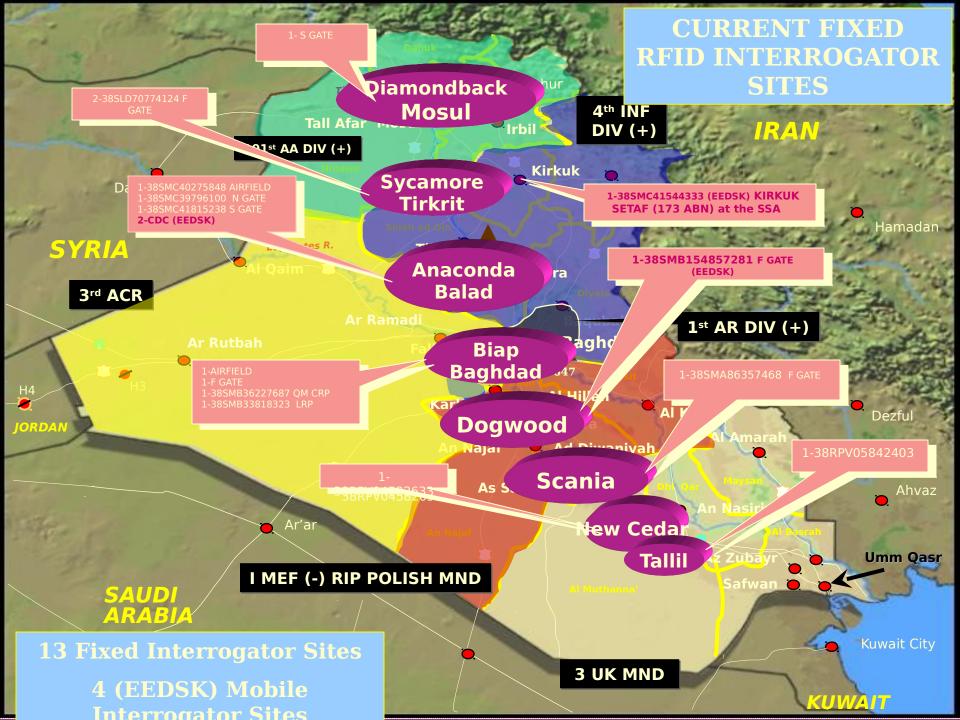
Fly Away Kit Complete Read Station #1 Assembly

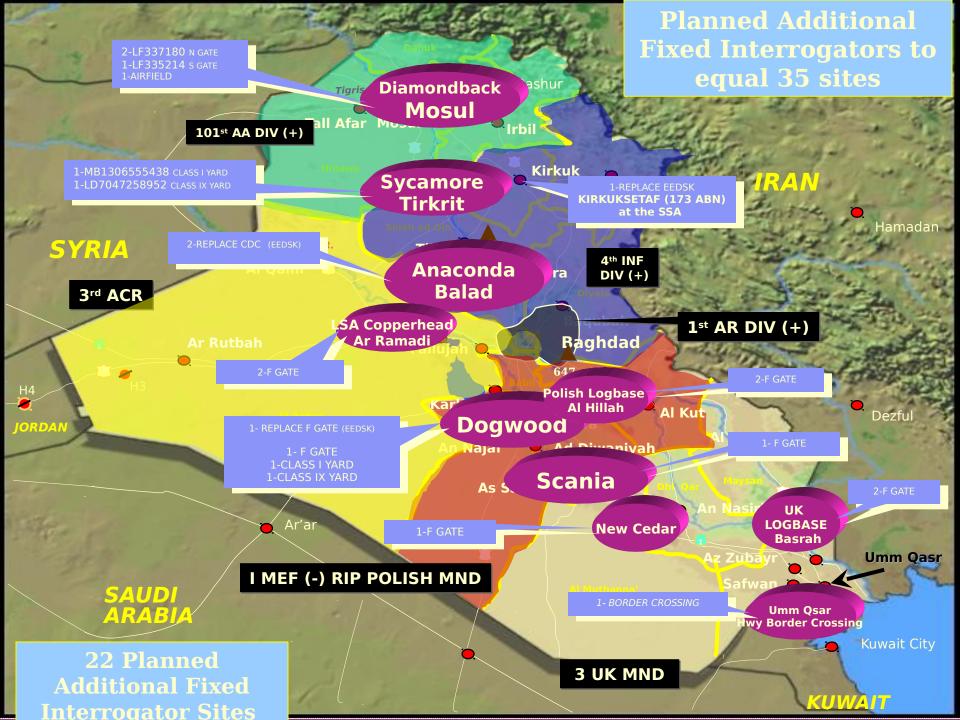


CONUS Ports









Other CENTCOM Installed RF Tag fixed sites



TAV IN TRANSIT PROCESSING STATION

TIPS Software

Key Features include:

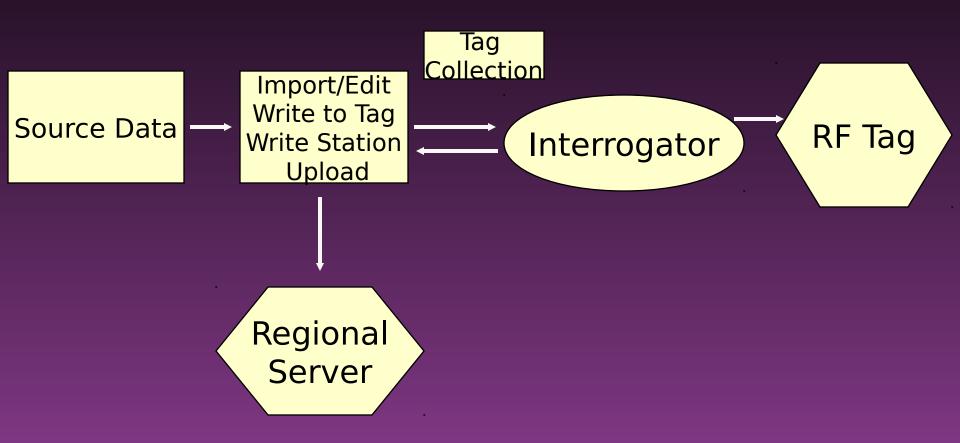
Writing and reading formatted data to and from RF tags
(DD 1384 and DD 1348-1A)

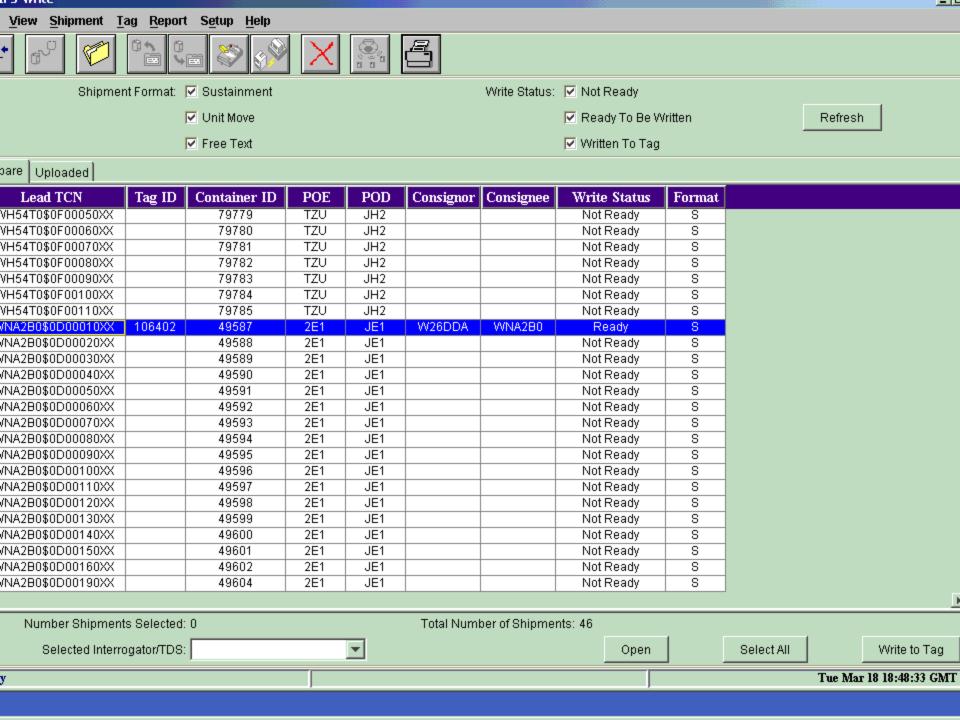
Uploading data to a regional servers

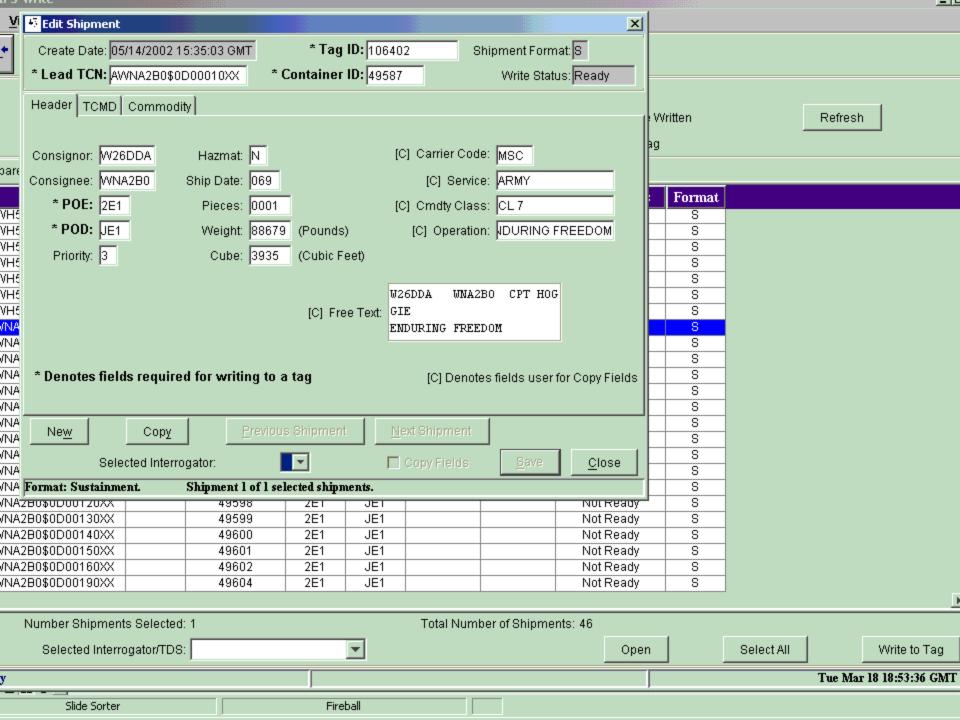
Entering and preprocessing TAV data

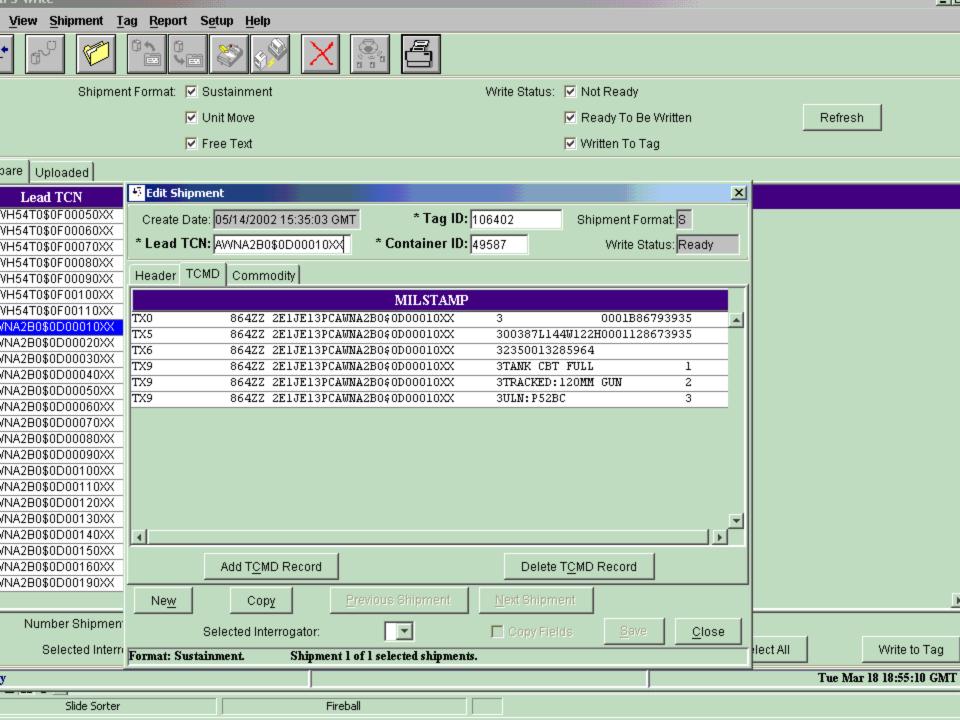
TIPS Software

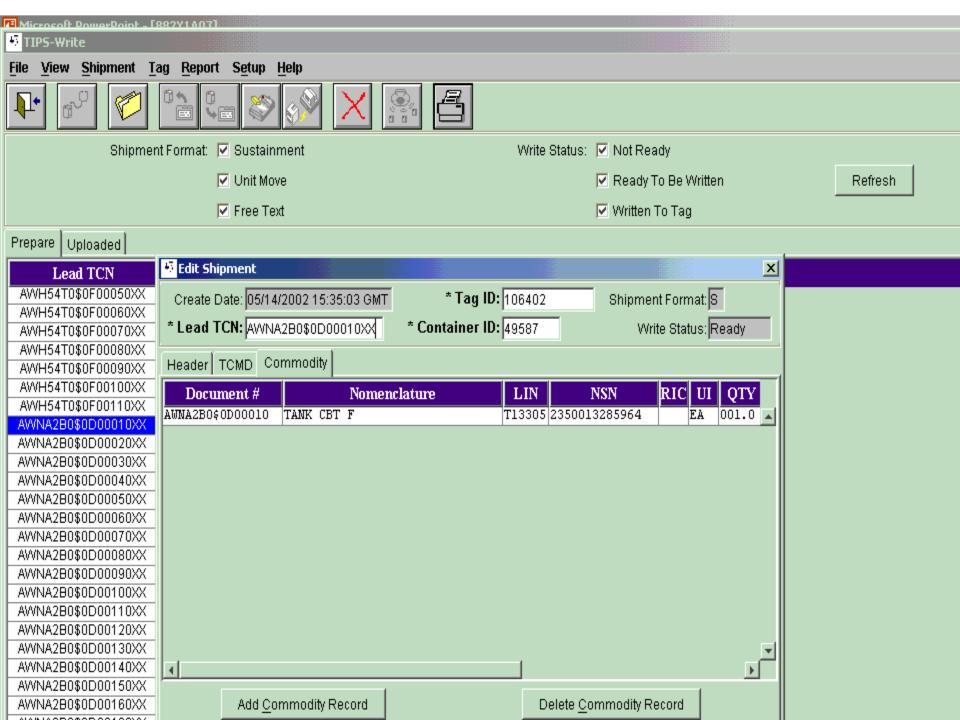
Write Station Operations























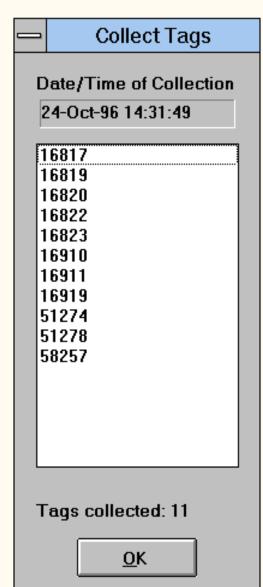


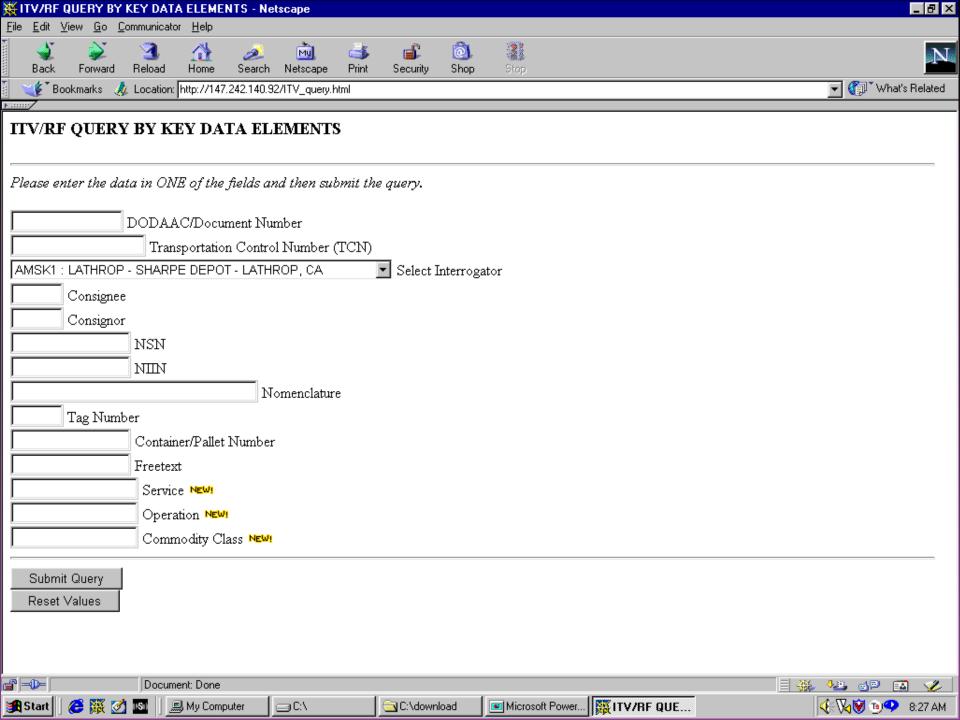


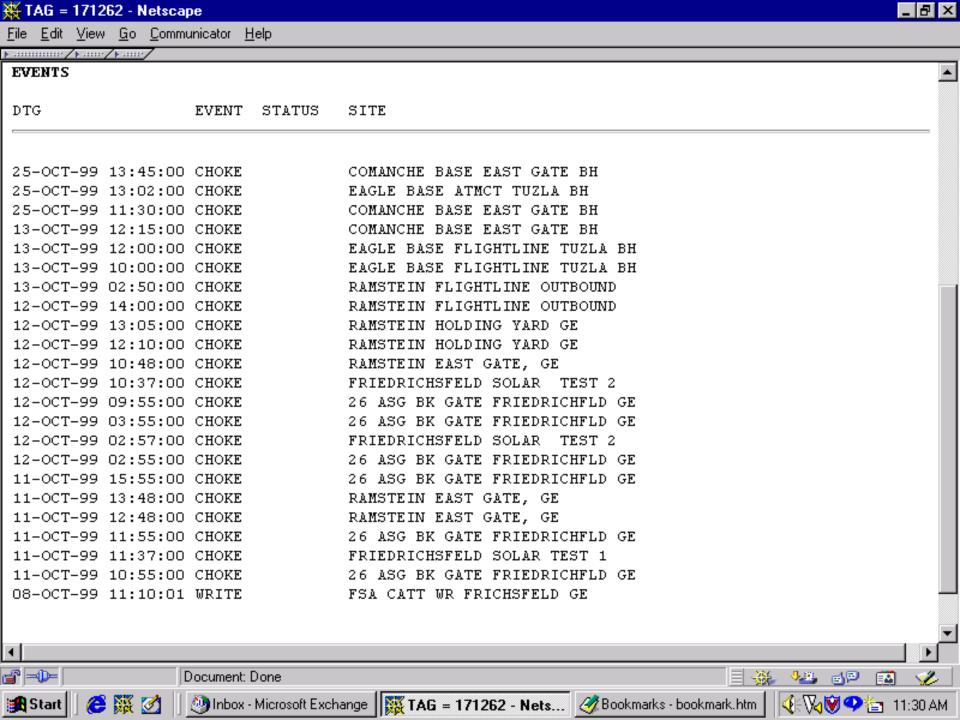


Collect Tags

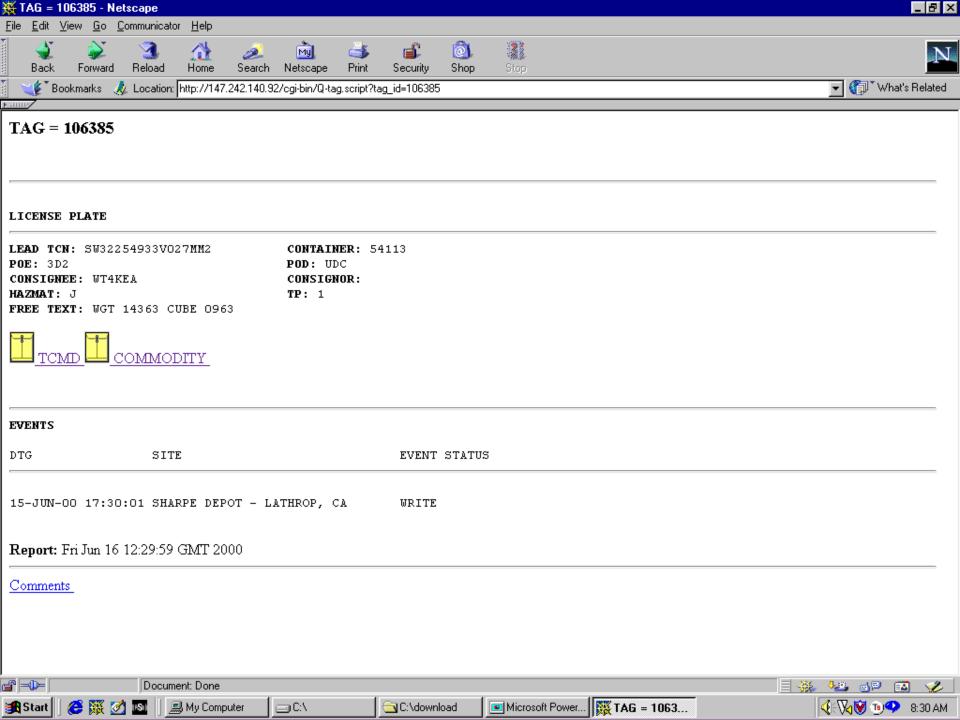
- Lists the current available tags
- Assign Tags to Shipments

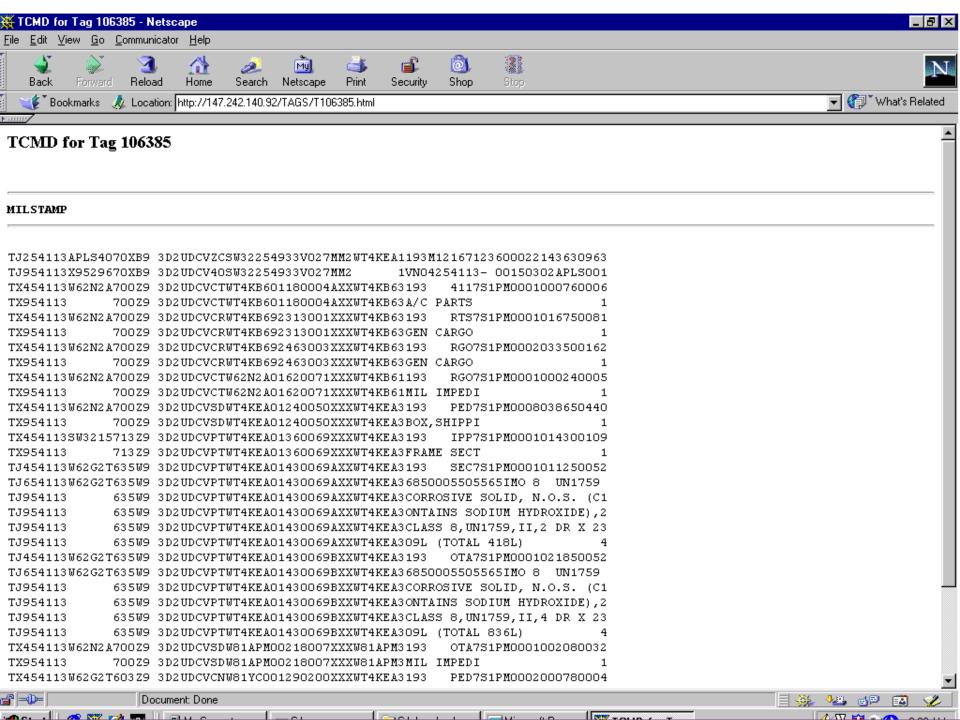


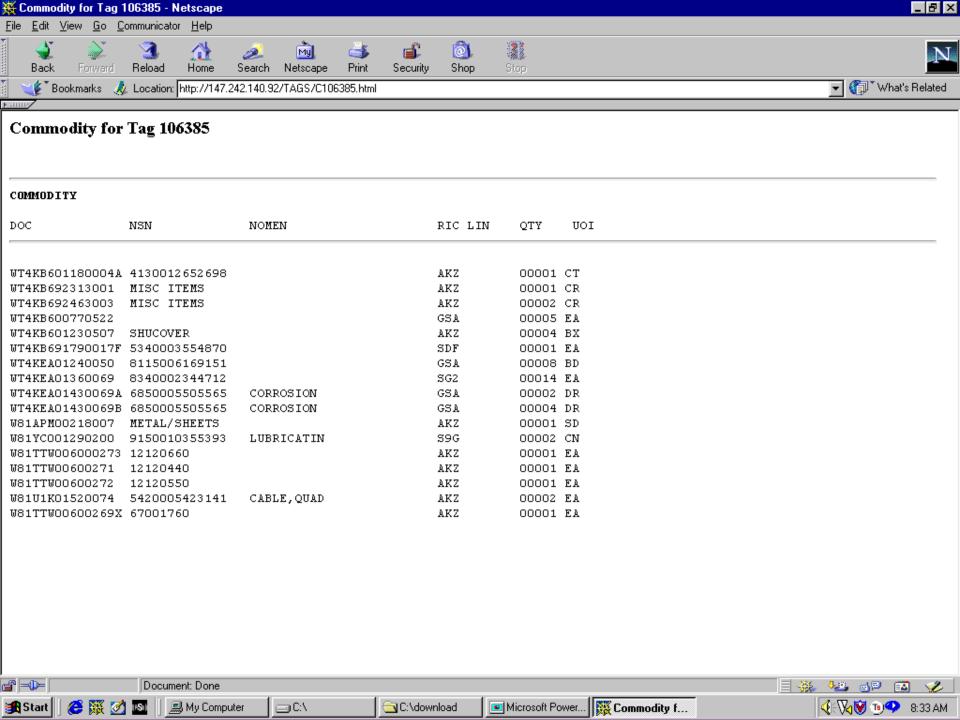




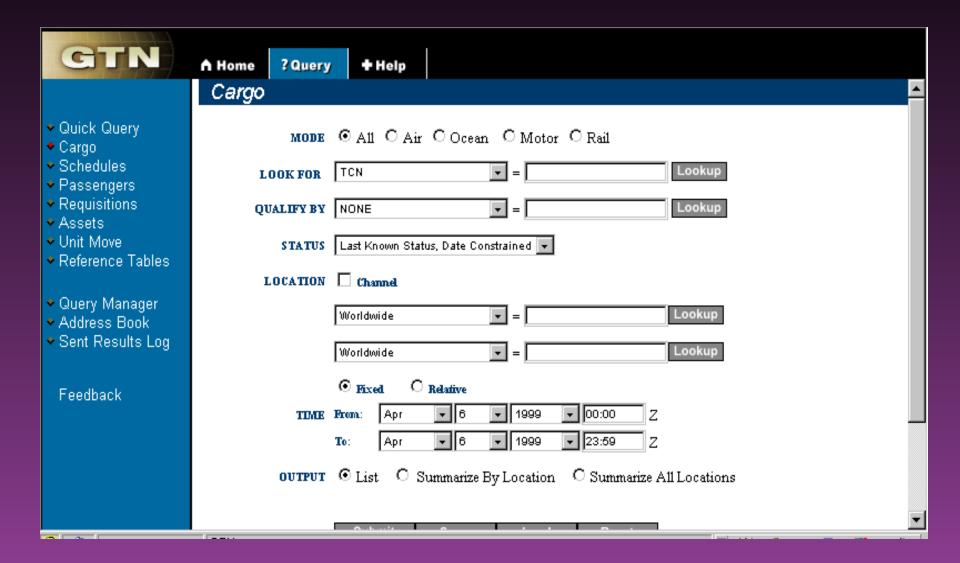








US Army Transportation School GTN Cargo Query Page



RF/AIT - Questions

